

STOCK

Work Order ID 135766

135766

Page 1

Item ID: D350-636-011

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Stop *NS2*

Start Date: 8/19/2015 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 9/2/2015 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: SA Date: 20150819 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2750-041	G

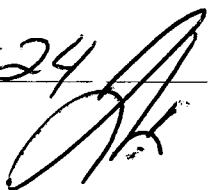
DAS

100 Document Control 6 0.00
100 DOCUMENT CONTROL 9-89

DC Memo 89° 0.00
Doc.Control -USB or Paperwork record fwd angle:

Photocopy blue file and type labels per PPP D350-636-011 CHG 007

ML5 1509-11

15-8-24 

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 135766

August 19, 2015 12:56:50 PM

135766

Page 2

Item ID: D350-636-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/2/2015

Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00

110

Skidtubes

Skidtubes

Memo

0.02

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill then ream holes using 0.500" reamer. PIN first side. Repeat process on second side.

ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE

Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for 2nd side only DT8863B for first side (detail B)

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE.

6-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

7-Open up holes of Detail A to 0.297" (total of 2 holes per side)

8-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004

15-8-24
AK

OK 15-08-24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 135766

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Page 3

Item ID: D350-636-011

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N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/2/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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A/R Aluminum Rod batch: *M13562*

9-Grind welds flush as per Dwg D2750

BE 15-08-24

120 QC10- Inspect visual per QSI004- ground welds 0.00

120

QC

Memo

0.00

Quality Control

*1*DAS
38
9-89

AUG 25 2015

130 QC5- Inspect part completeness to step on W/O 0.00

130

QC

Memo

0.00

Quality Control

*1*DAS
38
9-89

AUG 25 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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Description Work Order Deviation		Disposition		Completed By	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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135766

Page 4

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 9/2/2015 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code
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Accept Qty	Reject Qty	Reject Number	Insp. Stamp

140 Chemical Conversion Coat per QSI005 4.1

0.00

140

Memo

0.01

HandFinish

Hand Finishing

150 QC7-Inspect Chemical Conversion Coat

0.00

150

Memo

0.00

QC

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval																	
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				Lead hand / Supervisor Approval Verification																	
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OTHER : ☐																					

Work Order ID 135766

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135766

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Item ID: D350-636-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Stop ***NS2***

Start Date: 8/19/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/2/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

0.00

160

Skidtubes

0.02

Skidtubes

Memo

1-Open up holes using hole saw of Detail C and ground handling to 0.625"
(total of 8 holes per side)
as per dwg D2750.

2-Open up holes using hole saw of Detail B to 0.750" (total of 4 holes per side)
as per dwg D2750.

3- Open float hole using un-bit to 0.500" (4 per side)

4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750
(welding instructions on sheet 8)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI015, let cure for 12hrs.

A/R Sikaflex-291

batch: 132705

exp. date: 16-2-12

ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004
(welding instructions on sheet 8)

A/R Aluminum Rod

batch: MB1562

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

Dec 15-8-26

15-8-27

786 15-08-31

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 135766***135766***

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August 19, 2015 12:56:50 PM

Item ID: D350-636-011

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N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015 Start Qty: 1.00 ***1***

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per
dwg D275012-Deburr holes, ensure tube is free of all scratches before sending to
paint.

170

170

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

180

180

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

VERIFY C'BOARD IS GOOD

15-9-28/14
BE 15-09-02

DAS

38

9-89

SEP 08 2015

DAS

38

9-89

SEP 08 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Description Work Order Deviation		Disposition		Completed By	
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Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Work Order ID 135766***135766***

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Item ID: D350-636-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Stop ***NS2***Start Date: 8/19/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 9/2/2015 Req'd Qty: 1.00 ***1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Pressure Wash per QSI005 4.3	0.00				1	15-9-8		
190									
HandFinish	Memo	0.01							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.								
200		0.00							DAS 41 9-89
200						1			
SprayPaint	Memo	0.01							
Spray Painting	1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: <u>130992</u>								15-9-9
	2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: <u>132664</u>								
210	QC14- Inspect Spray Paint	0.00							
210									DAS 15 9-89
QC	Memo	0.00							
Quality Control	Inspect for foreign object per QSI 024								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 135766***135766***

Page 8

Item ID: D350-636-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Stop ***NS2***

Start Date: 8/19/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/2/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230

230

HandFinish

Hand Finishing

HandFinishing

Memo

0.00

0.02

1- Install inserts as per Dwg D2750

2-Inspect for Foreign Objects

3- Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: 11132205EXP DATE: 16162

4- Assemble o'ring to plug as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 11131349 RTU 542 11131311 16165- Coat all exposed fasteners with "LPS Procyon" batch: 11122900

240

240

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

DAS
38
89

SEP 14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Work Order ID 135766

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135766

Page 9

Item ID: D350-636-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Stop ***NS2***

Start Date: 8/19/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/2/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
250						DAS 27			
Packaging	Memo	0.00				9-89			
Packaging						SEP 15 2015			
260	QC4- 100% Inspect kits for completeness	0.00							DAS 02 9-89
260									SEP 15 2015
QC	Memo	0.00							
Quality Control	*****ensure antiseize is on AN8C21A bolts*****								
270		0.00							68-6 02
270									DAS
Packaging	Packaging								SEP 15 2015
Packaging	Memo	0.00							
	Package as per PPP D350-636-011								
	Location : FG072								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 135766

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135766

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Item ID: D350-636-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Stop ***NS2***Start Date: 8/19/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 9/2/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00

280

QC

Memo

0.00

Quality Control

ML5

SEP 16 2015

ML5

SEP 16 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval 	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER :					

Picklist Print

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Page 1

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:I 02.09.25 Rearranged procedure steps KJ
 IPP Rev:J 06-03-23 As per Rev D JLM
 IPP Rev:K 06-07.13 As per dsi9343 EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC
 IPP Rev:M 08-04-22 update steps 4, 13 DD verified by:EC
 IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec
 IPP Rev:O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
 DD verf:EC IPP Rev:P 10.06.22 revise
 seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH
 DD verf:EC IPP REV:R 13.08.27 PER ECN13-594 DD
 VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-1		Manufactured	No			230	Each	99.0000	8	8			
D3492-1									**				
Plug													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP001				99					
				131113				9					
				131952				40					
				<u>133498</u>				50					
D3492-3		Manufactured	No			230	Each	126.0000	8	8			
D3492-3									**				
Plug													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP001				126					
				125905				2					
				131036				22					
				<u>131899</u>				53					
				133470				49					

13

all 12/09/10

x 8

all 13/09/10

x 8

Picklist Print

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Page 2

Work Order ID: 135766

Parent Item: D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

135766

D350-636-011

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

511.0000

8

8

NAS1611-010

O-RING

**

lll 15/09/14

Location

Loc Qty

Loc Code

FP001

511

m130770

343

m131618

168

x 8

NAS1149D0863J

Purchased

No

250

Each

614.0000

2

2

NAS1149D0863J

Washer

**68-6
20
SVD**

**

**DAS
27
9-89**

SEP 15 2015

Location

Loc Qty

Loc Code

FP001

53

125484

53

ST260a

415

125268

315

125635

100

ST269

146

125268

146

2

D2744

Manufactured

No

110

Each

19.0000

1

1

D2744

Cap

**

BK 15-08-24

Location

Loc Qty

Loc Code

LG001

19

128212

19

110

Each

4.0000

1

1

D2600-3-BENT-LH

Manufactured

No

D2600-3-BENT-LH

Extrusion Bent LH

**

15-8-24

Location

Loc Qty

Loc Code

LG002

4

129718

4

1

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Shop Packet Print

Page 2

Picklist Print

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Page 3

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

D2743

Manufactured No

160 Each

162.0000 8 8

D2743

Crossbolt Spacer

**

BE150B31

Location

Loc Qty

Loc Code

LG001

162

130731

162

8

D2739

Manufactured No

160 Each

10.0000 1 1

D2739

350 I Beam

**

15-8-27

Location

Loc Qty

Loc Code

LG002

10

131155

10

1

D3490-3

Manufactured No

160 Each

59.0000 4 4

D3490-3

Cross Bolt Spacer

**

BE150B31

Location

Loc Qty

Loc Code

LG

59

128985

1

4

130730

58

4

D3490-1

Manufactured No

160 Each

143.0000 4 4

D3490-1

Cross Bolt Spacer

**

BE150B31

Location

Loc Qty

Loc Code

LG

39

130729

16

4

133205

23

4

LG001

104

133528

20

134019

84

4

4

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Picklist Print

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Page 4

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

AELS8-1032-225 Purchased

No

Each

1,005.000

38

ALS4-1032-225

Rivnut

all 12/09/11

Location

Loc Qty

Loc Code

FG

120

M127028

120

FP001

422

M131582

422

st549

463

M131582

463

X38

D3793-3

Manufactured

No

230

Each

14.0000

1

1

D3793-3

Wearplate Aft

all 12/09/11

Location

Loc Qty

Loc Code

FP002

14

130534

14

230

Each

78.0000

1

1

AN8C35A

Purchased

No

AN8C35A

Bolt

all 12/09/11

Location

Loc Qty

Loc Code

FG

5

121275

5

FP001

73

m131947

13

m132169

15

m132381

15

m132522

15

m132674

15

X1

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Shop Packet Print

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Picklist Print

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Page 5

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

D3793-1
D3793-1
Wearplate Fwd

Manufactured No 230 Each 14.0000 1 1

**

all 12/09/14

Location

Loc Qty

Loc Code

FP002

14

130508

14

VI

D3488-041
D3488-041
Blade Fitting LH

Manufactured No 230 Each 11.0000 1 1

**

all 12/09/14

Location

Loc Qty

Loc Code

FP001

11

128831

3

129601

8

VI

D3794-3
D3794-3
Gasket Aft

Manufactured No 230 Each 30.0000 1 1

**

all 12/09/14

Location

Loc Qty

Loc Code

FP001

30

125917

1

127383

28

92658

1

VI

Picklist Print

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Page 6

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

643.0000

4

4

AN6C44A

Bolt

all 130416

Location

Loc Qty

Loc Code

FG

2

103964

2

FP001

159

131649

100

m131367

1

m131856

6

m132169

52

ST286A

417

m130863

13

m131946

54

m132381

52

m132522

52

m132556

246

ST332

11

m130863

11

ST333

54

m130863

4

m131151

50

xd

MS21083C8

Purchased

No

230

Each

5.0000

1

1

MS21083C8

Nut

all 130416

Location

Loc Qty

Loc Code

ST299

3

m131618

3

ST300

2

m132067

2

11133611

11

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Shop Packet Print

Page 6

Picklist Print

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Page 7

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

D3536-25

Manufactured No

230

Each

23.0000

1

1

D3536-25

Gasket Center

all 12/09/10

Location

Loc Qty

Loc Code

FG

6

87053

2

95328

4

FP001

17

125909

1

132316

15

89057

1

xl

D3631-1

Manufactured No

230

Each

54.0000

8

8

D3631-1

Washer

all 12/09/10

Location

Loc Qty

Loc Code

FP001

54

128320

6

131026

48

xb

D3791-1

Manufactured No

230

Each

15.0000

1

1

D3791-1

Wearpad

all 12/09/10

Location

Loc Qty

Loc Code

FP002

15

128234

15

xl

Picklist Print

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Page 8

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

230

Each

4,922.000

38

38

NAS1149C0332R

WASHER

all 18/08/16

Location

Loc Qty

Loc Code

FP001

2140

m130325

2140

GA

221

m131618

221

ST260a

2000

m132930

2000

ST271

561

m129390

72

m132262

489

x38

D2745

Manufactured

No

230

Each

105.0000

8

8

D2745

Bushing

all 18/08/16

Location

Loc Qty

Loc Code

FP001

105

129584

7

131049

98

x9

AN3C5A

Purchased

No

230

Each

861.0000

34

34

AN3C5A

Bolt

all 18/08/16

Location

Loc Qty

Loc Code

FG

5

122800

5

ST338a

856

M131803

8

M132640

348

M132930

500

x34

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Shop Packet Print

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Picklist Print

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Page 9

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

230

Each

72.0000

3

3

D3537-1

Wearpad

all 12/09/10

Location

Loc Qty

Loc Code

FG

18

B136312

x3

79833

8

88562

10

FP001

45

128225

1

133512

9

134225

35

ST611

9

125911

9

NAS1149C0832R

Purchased

No

230

Each

108.0000

1

1

NAS1149C0832R

Washer

all 12/09/10

Location

Loc Qty

Loc Code

ST271

108

m125807

108

x1

AN3C6A

Purchased

No

230

Each

117.0000

4

4

AN3C6A

Bolt

all 12/09/10

Location

Loc Qty

Loc Code

CA

39

m128704

39

FG

10

122416

10

ST338a

38

m128769

38

ST349

30

m132767

30

x4

August 19, 2015 12:56:56 PM

Shop Packet Print

Page 9

Picklist Print

August 19, 2015 12:56:56 PM

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1611-013

Purchased No

230

Each

294.0000

8

8

NAS1611-013

O-Ring

**

ll 15/09/10

Location

Loc Qty

Loc Code

FP001

294

m130758

294

D3535-25

Manufactured No

230

Each

8.0000

1

1

D3535-25

Wearplate Center

**

ll 15/09/10

Location

Loc Qty

Loc Code

FG

2

95077

2

FP002

6

128224

6

D3794-1

Manufactured No

230

Each

17.0000

1

1

D3794-1

Gasket Fwd

**

ll 15/09/10

Location

Loc Qty

Loc Code

FP001

17

130509

17

MS21043-6

Purchased No

230

Each

52.0000

4

4

MS21043-6

NUT

**

ll 15/09/10

Location

Loc Qty

Loc Code

FG

20

103693

20

11133077

FP001

4

131618

2

m130325

2

ST304

28

m132164

28

Picklist Print

August 19, 2015 12:56:56 PM

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250

Each

45.0000

2

2

D3493-1

**DAS
02
9-89**

Washer

**DAS
27
9-89**

Location

Loc Qty

Loc Code

FG

10

97201

10

ST039

35

128755

35

***ONLY INSTALL IF INSTALLING ON APICAL
FLOAT SYSTEM***

MS21083C8

Purchased No

250

Each

5.0000

2

2

MS21083C8

Nut

**DAS
02
9-89**

**DAS
SEP 27 2015
9-89**

Location

Loc Qty

Loc Code

ST299

3

m131618

3

ST300

2

m132067

2

m133016

Picklist Print

August,19, 2015 12:56:56 PM

Page 12

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

DAS
02
9-89

Purchased

No

250

Each

94.0000

2

2

AN8C21A

Bolt

DAS
27
9-89

SEP 15 2015

Location

Loc Qty

Loc Code

FG

4

123966

2

m132169

2

ST312A

61

m132381

20

m132542

11

m132674

30

ST332

29

m131100

1

m132169

2

m132522

26

NAS1515H3L

Purchased

No

230

Each

323.0000

4

4

***NAS1515H3I ***

Washer

Location

Loc Qty

Loc Code

FG

40

102472

40

FP001

55

m127831

55

ST266

228

m127831

40

m130726

188

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Shop Packet Print

Page 12

Picklist Print

August 19, 2015 12:56:56 PM

Work Order ID: 135766

135766

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 8/19/2015

Required Date: 9/2/2015

Start Qty: 1.00

Required Qty: 1.00

D2741

Manufactured No

250

Each

29.0000

1

1

D2741
Replacement Blade
DAS
02
9-89

DAS
27
9-89

DAS
0
9-89

Location

Loc Qty

Loc Code

FP001

1

132981

1

ST538

28

131616

28

D3532-1

Manufactured No

250

Each

13.0000

2

2

D3532-1
Spacer
DAS
02
9-89

DAS
27
9-89

SEP 15 2015

DAS
6
9-89

Location

Loc Qty

Loc Code

ST041

13

131132

13

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1	1	D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
1	1	1	1	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3535-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AEL S-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES (Ø0.297) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 36 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
FINISH WITH MEK DEGREASER
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

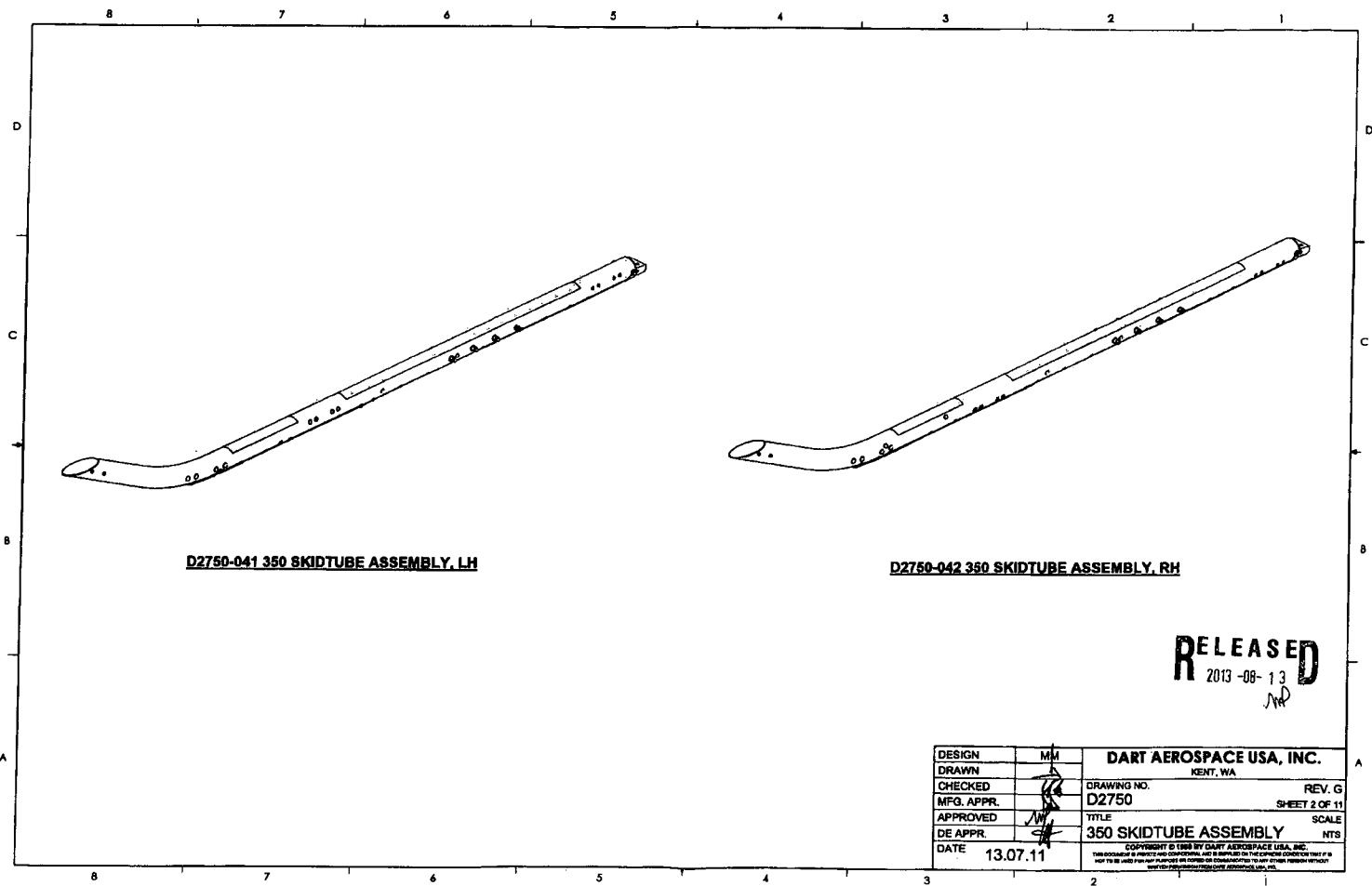
135766
20150819
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2013-08-13
ND

G	CORRECTED TOLERANCE ON Ø0.500 THRU HOLE: IS +0.010/-0.000, WAS +0.001/-0.000 (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1/-4/-5/-6/-7); UPDATED FINISH OPTIONS, INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3; REASON: PARTS-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE D81 8413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3532-1/-3 (ZN C8-1); D3794-1/-3 REPLACES D3536-1/-3 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (2 PL); WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H3L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 8139/8157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	08.11.18
B	CHANGE MS24084-5283 TO AN8-16A	CP	08.09.01
A	NEW ISSUE	DS	08.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.07.11		

DART AEROSPACE USA, INC.

KENT, WA
DRAWING NO. D2750
TITLE 350 SKIDTUBE ASSEMBLY
REV. G
SHEET 1 OF 11
SCALE NTS

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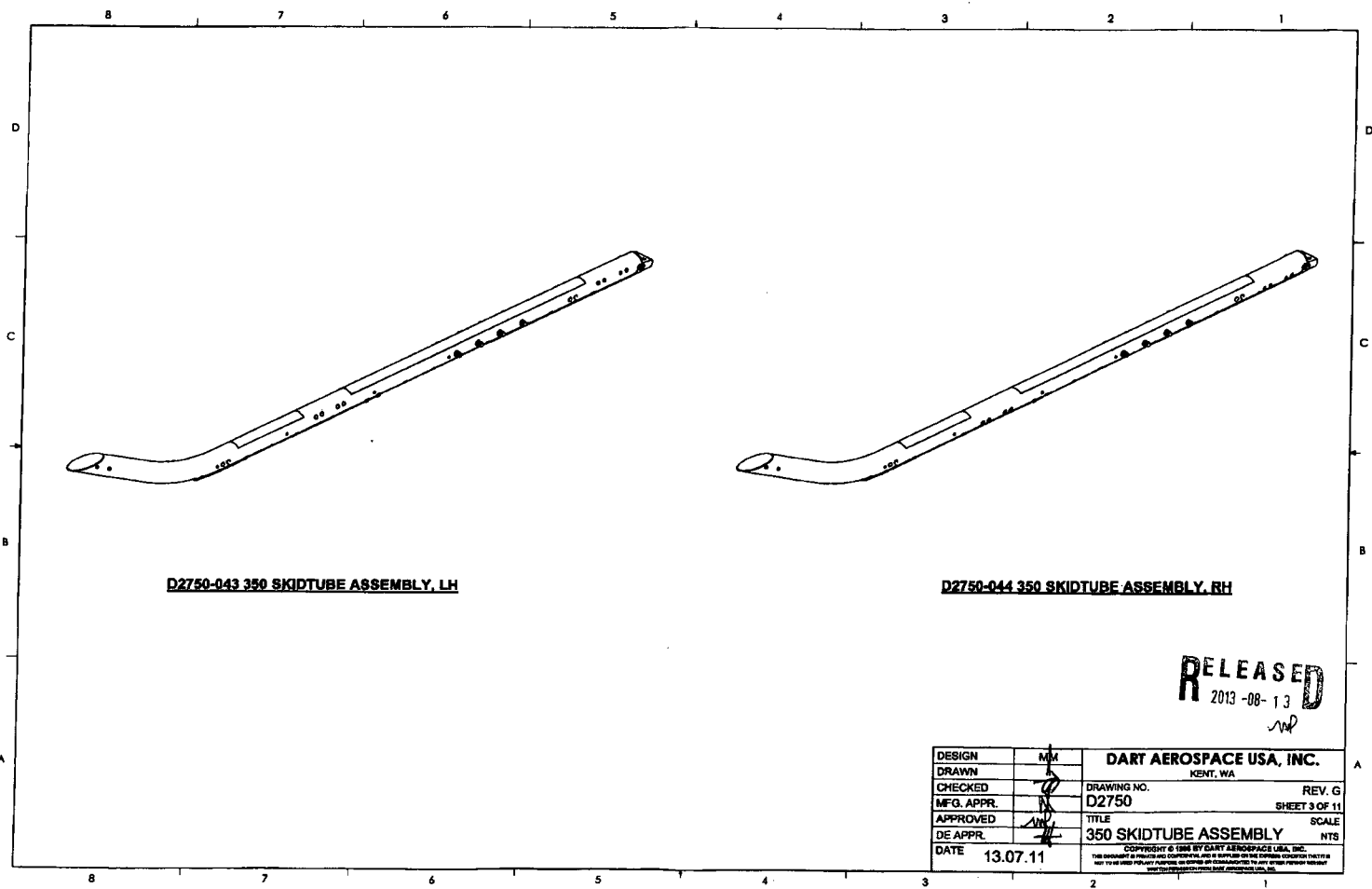


D2750-041 350 SKIDTUBE ASSEMBLY, LH

D2750-042 350 SKIDTUBE ASSEMBLY, RH

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MFG. APPR.		SHEET 2 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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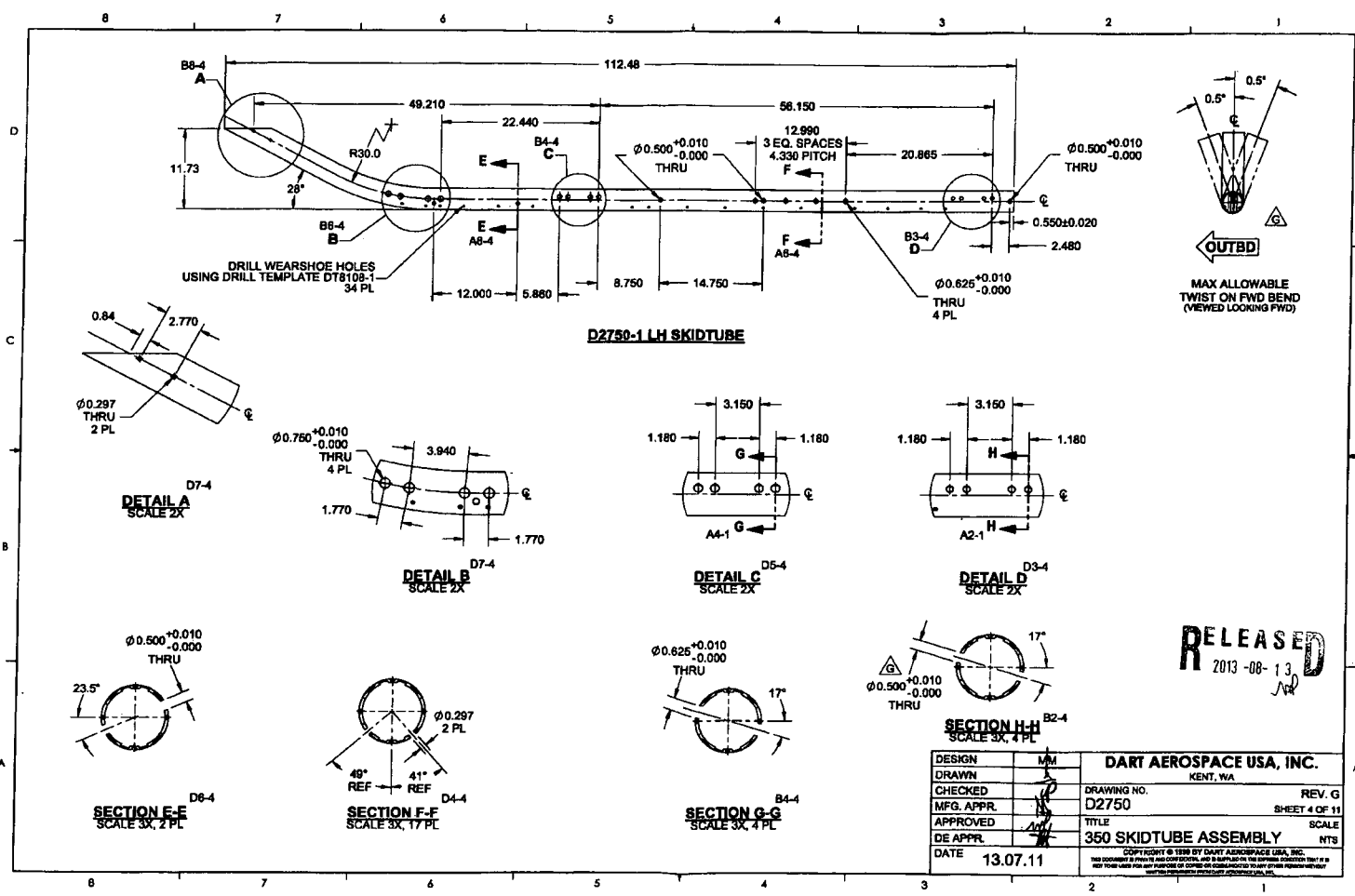


D2750-043 350 SKIDTUBE ASSEMBLY, LH

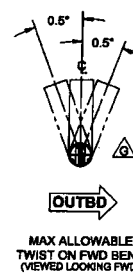
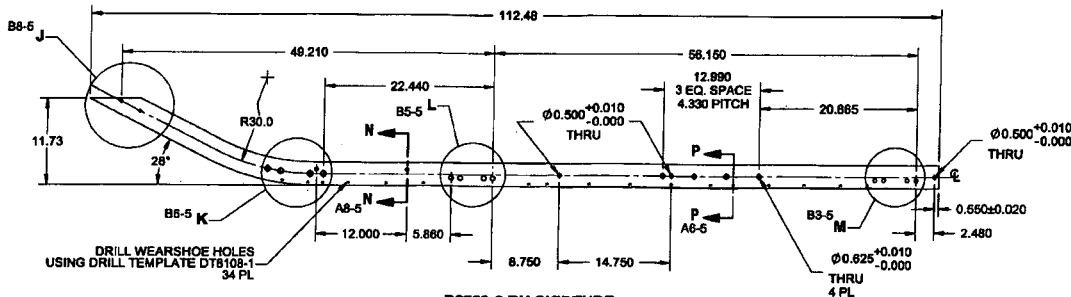
D2750-044 350 SKIDTUBE ASSEMBLY, RH

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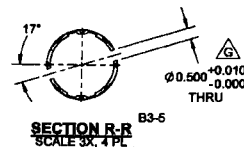
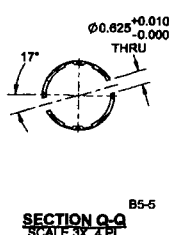
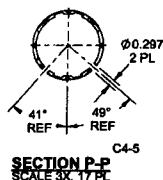
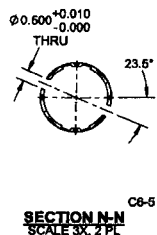
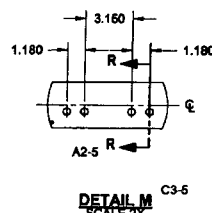
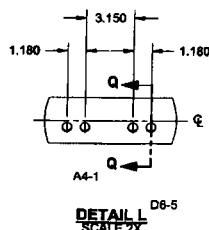
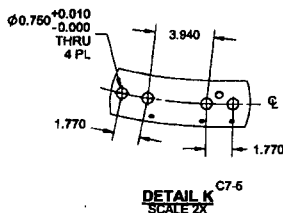
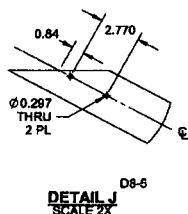
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MFG. APPR.		SHEET 3 OF 11	
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MFG. APPR.				SHEET 4 OF 11	
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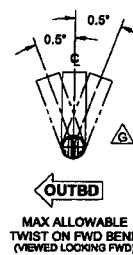
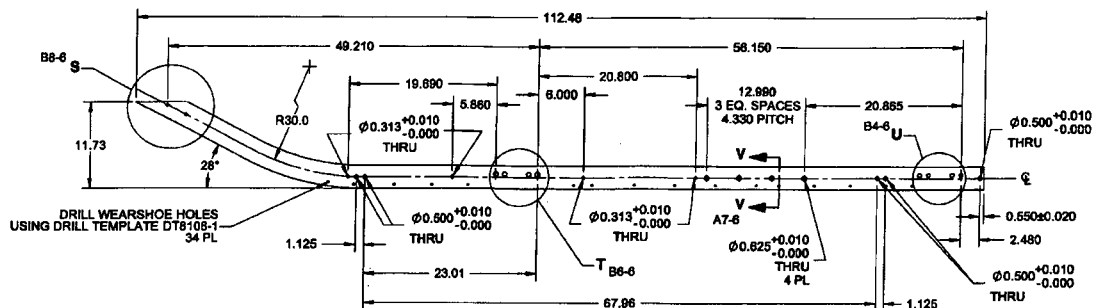


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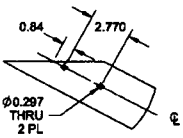


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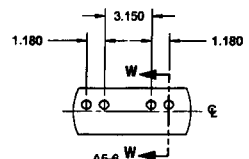
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MFG. APPR.			SHEET 6 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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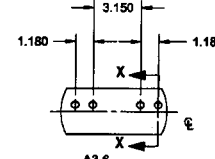
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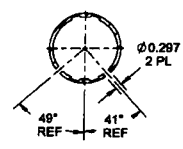
DETAIL S
D8-6
SCALE 2X



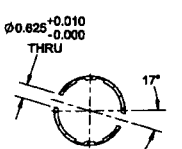
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C5-6
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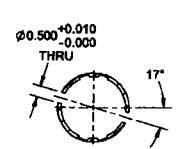
DETAIL U
D3-6
SCALE 2X



SECTION V-V
C4-6
SCALE 3X, 17 PL



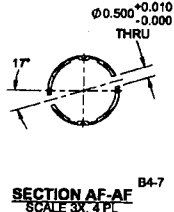
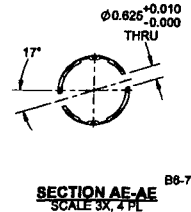
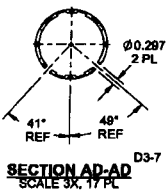
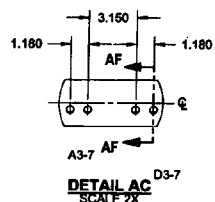
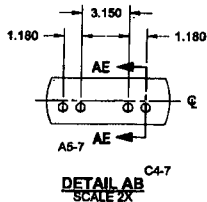
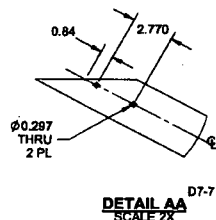
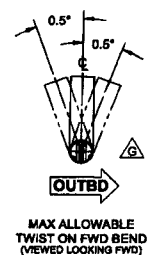
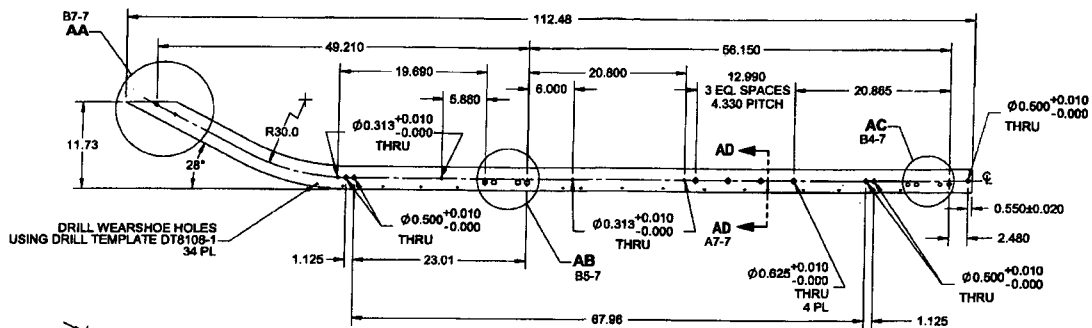
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SCALE 3X, 4 PL



SECTION X-X
B4-6
SCALE 3X, 4 PL

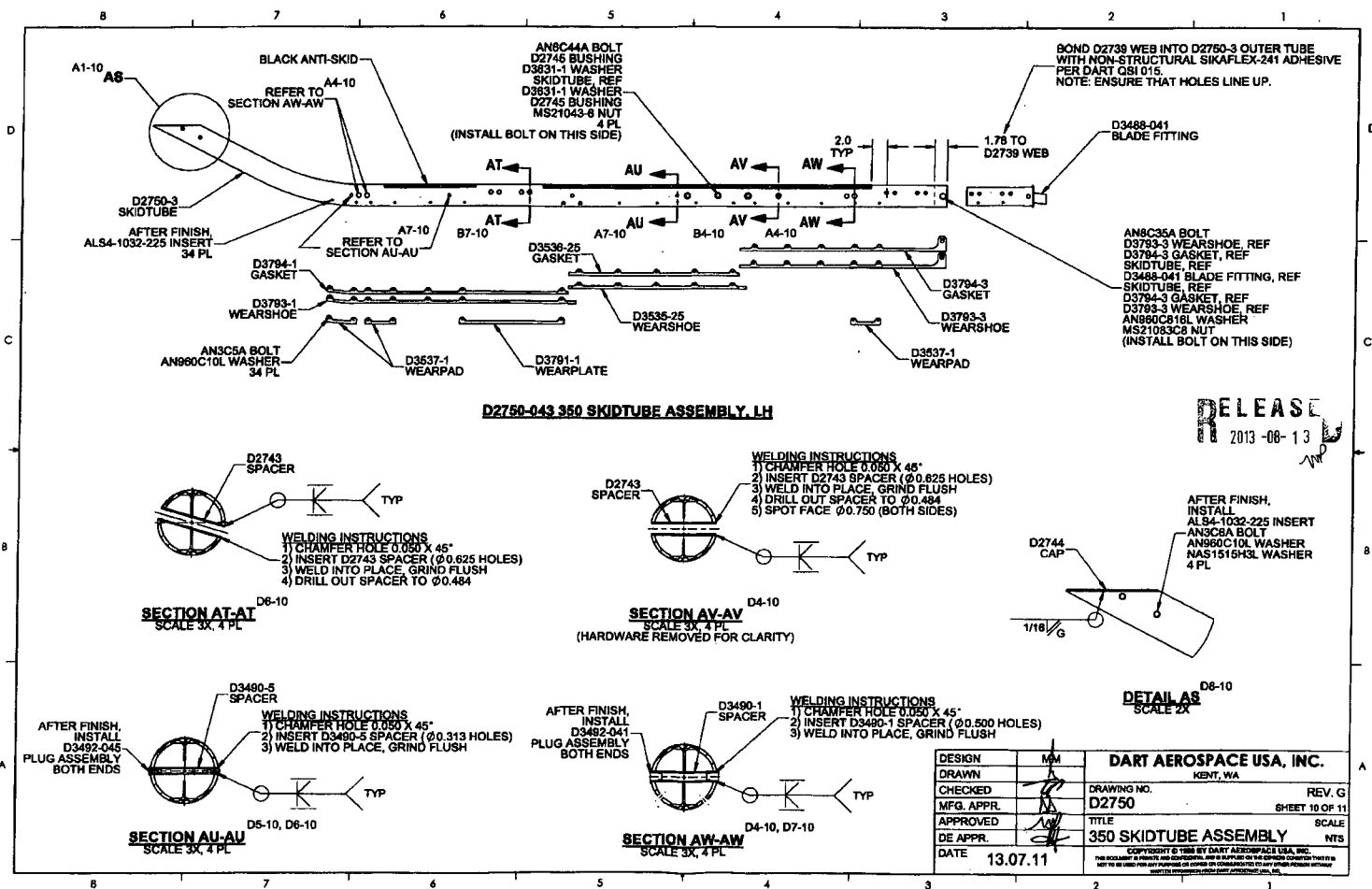
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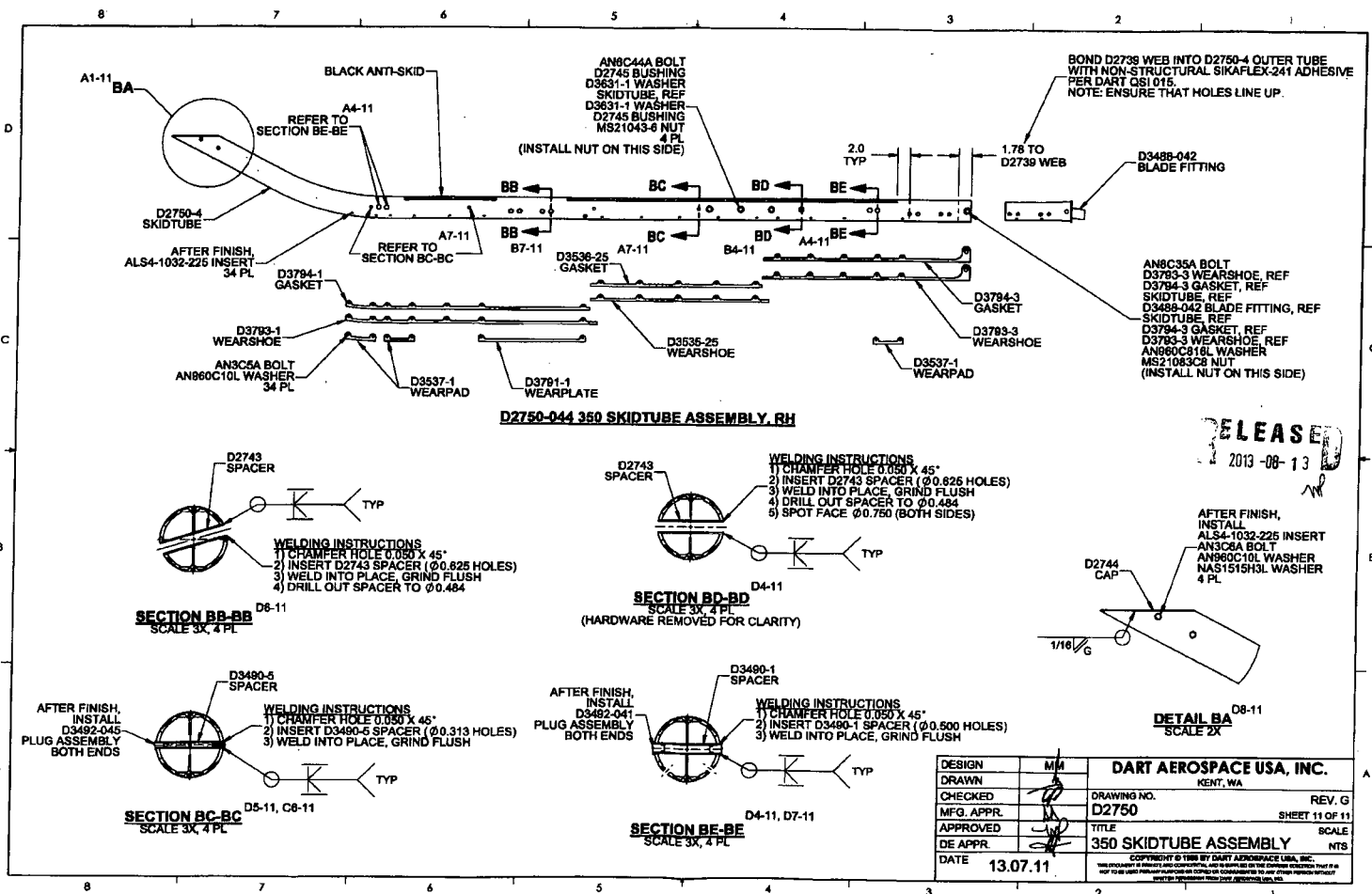
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CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2750	SHEET 6 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	13.07.11		



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DE APPR.		TITLE 350 SKIDTUBE ASSEMBLY NTS	
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MFG. APPR.		D2750	
APPROVED		TITLE	SHEET 11 OF 11
DE APPR.		350 SKIDTUBE ASSEMBLY	SCALE
DATE	13.07.11		NTS